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BULBS FOR POTS

AND SPRING PLANTING IN THE GARDEN



A CATALOG OF THE BULBS AND PLANTS OF THE AMARYLLIS, IRIS,
ORCHID, GESNERIA AND OTHER PLANT FAMILIES
AND MANUAL OF THEIR CULTURE
AFRICAN VIOLETS

Many Reduced Prices. New Items Listed. Complete Culture Directions.
A Personal Letter,—to You.

SPRING 1962

★
CECIL HOUDYSHELE

1412 Third St.

La Verne, Cal



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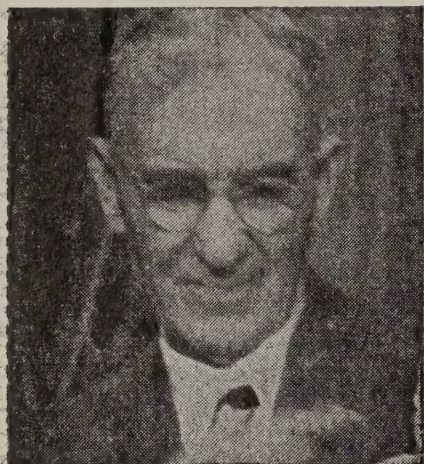
A PERSONAL LETTER — TO YOU

Dear Floral Friends,

Among our new items for this spring is *Liatris spicata*, Blazing Star. Large extremely attractive spikes of flowers. Flowers from July till frost. Grows about 30" high and also makes an excellent cut flower for vases. Plant in spring, about 3" deep and 12-16" apart in any good well-drained garden soil. Planting three, or more, in a group is recommended. The roots can be left in the ground all winter and will produce these beautiful flowers for many years to come. Comes only in one color — Purple Violet. 50c ea. 3 for \$1.29. 12/\$4.50.

Customers are invited to visit our nursery when in Los Angeles area. Drive east on San Bernardino Freeway to the La Verne sign (Los Angeles Fair), to Fairgrounds, left to A Street, right to 3rd St., left on Third Street to 1412 3rd. If from the east get off Freeway at Towne, north to La Verne Road, west to La Verne.

All are invited to attend the Pomona African Violet Show April 14 and 15th. Time Saturday 1 - 9 p.m., Sunday 10 a.m. to 6 p.m. at the First National Bank, Bonita and D Streets, La Verne.



Cecil Houdyshel

The world is again worried by the fear of war. I am convinced that the Russians are against war, although they like to worry us if they can. Americans are a mixture of many nations. During the war of the Revolution a Frenchman, Lafayette, came over and fought for us. Now we have cities and towns named Lafayette in many states.

The war between the North and South was to do away with slavery. Abraham Lincoln said, "God never made a man to belong to another man." My father was in that war.

Let us hope and pray that never again is our beloved America torn by war.

Sincerely,
CECIL HOUDYSHEL

TERMS AND INSTRUCTIONS FOR ORDERING

Prices in this catalog cancel all former prices. They are for one bulb unless otherwise stated. 12 bulbs are sold for price of 10 or 6 for price of 5. 100 bulbs for price of 70 unless noted. Books, garden supplies and plants take no quantity discounts. California customers must add 4% Sales Tax.

Remit in advance, in full, by check or M.O. No C.O.D. No charge accounts carried. Nothing reserved unless paid for in full. These terms reduce our expenses and lower the cost to you. 1, 2 or 3 cent stamps are accepted for small sums—under \$1.00.

Insurance up to \$10.00, 10c. \$10.00 to \$50.00, 20c. Postal insurance covers all except freezing in transit. **Special Handling** costs 25c up to 2 lbs.; 2 to 10 lbs., 35c. **Special Delivery** is better as it also speeds delivery and is handled more carefully. We are not responsible if plants are not immediately taken indoors. Up to 2 lbs. costs 45c. 2 to 10 lbs., 55c. Over 10 lbs., 70c. Each fee is for one package only.

Wholesale. There are several items we can supply wholesale. Send your want list and we will quote our best quantity prices. We can quote African Violets to dealers only.

Partial Shipments are made if bulbs are not all dormant at same time. We deliver everything within the season for correct planting. We must collect from you the fees for Insurance, Special Handling, Special Delivery.

We guarantee our bulbs to be true to name and healthy and replace them if not.

Postage rates. With postage so high we find we must ask for postage. If you want to enclose the carriage charges with your order you may add 10% of the order with minimum of 50c, in which case there will be no additional charges for postage, nor will there be any refund. This applies unless otherwise stated. If wanted by airmail it must be at your expense. Or we will send Express collect for carriage.

Catalogs. Spring Catalog mailed Jan. 1; Fall Catalog, Aug. 15, or soon after.

General Culture Directions

Rich sandy loam is the best soil. But if too sandy, it may lack fertility. It will require more rainfall or irrigation. The ideal garden soil will contain sand, clay and humus.

All soils require the addition of much humus. Compost all garbage, weeds, leaves, cut branches and manures. When rotted, add to soil and thoroly mix.

Fertilizer. We recommend only animal manures, compost and commercial fertilizers that are mostly of organic origin such as **Spoonit** and **Blue Whale**, listed in this catalog. In the outside garden fresh manure can be used on most plants that are growing vigorously as a very light mulch, but after flowering. Too much fertilizer before flowering may almost or wholly stop the flowers. When the growth of a plant becomes abnormally rapid it is unlikely to flower or produce fruits.

Do not fertilize a plant in dry soil, or use manure (unless thoroly rotted in a compost heap) in the soil before planting bulbs, seeds or plants. Water lawns, trees, and plants well the day before applying fertilizer and again a few days after application. Do not fertilize a sick plant in order to make it well. You are more likely to make it worse or even kill it. Small plants and seedlings should not have too much either. Lush, rapid growth may be weak and "flabby." Sturdy growth with firm structure is better. Little and often is the best rule for fertilizing.

Compare plants with people. Both are living, organic beings. Air, water and food are necessary for their growth and health. But one does not give babies beefsteak, fried potatoes, apple pie and a cup of coffee. Nor is this a good diet for an invalid or an ill person, however good it may be for one in vigorous health who performs hard physical labor. Nor should plants be over-fed or fed at all if sick of thirsty. But since one cannot add much rich food when potting a bulb, very good results may be obtained by a monthly feeding of very weak liquid manure, color or very weak tea. A more convenient way is to use Spoonit, which we list under Garden Supplies.

After blooming, many neglect their bulbs. As a result the bulbs do not flower the following year. For success one must continue to give good culture. This is the time to fertilize, irrigate and cultivate frequently, until yellowing foliage indicates the bulb is becoming dormant. During this growth period next year's flower buds are formed.

Depth of planting and distance apart often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. If left in one place a few years, most bulbs adjust themselves to their preferred depth. Approximately, bulbs should be about 2 or 3 times their diameter apart unless their habit of growth is spreading—like Ranunculus. In such cases plant farther apart. Bulbs as large as Daffodils may be 4" to 6" deep. Bulbs with a heavy erect stem need deep planting in order to remain erect. Plant deeper in light sandy soil than in heavy soils and in cold climates to protect them from frost. A winter mulch will help protect.

Pests. Snails, slugs, ants, mealy bugs, thrips, aphids, leaf hoppers, mites, red spider and scale are among the most serious pests in the garden or on house and greenhouse plants. They must be controlled. See our listing of **Insecticides** under **Garden Supplies**.

Acid and Alkaline Soils. Most plants thrive in mildly acid, neutral or mildly alkaline soils. But others do not have so wide a range of tolerance. Rhododendrons, Azaleas, Camellias, Gardenias, Zantedeschias, Caladiums (and other members of Arum family), Nerines, Haemanthus, Gloxinias, Begonias, Orchids and most shade loving plants require an acid soil. Some like Gladiolus prefer mildly acid to neutral soils; Bearded Iris do best in neutral to alkaline soils. The acid-alkali balance depends upon the concentration of hydrogen ions in a saturated solution. This is expressed in pH units. pH7 is neutral.

Below that the acidity increases: above it the alkalinity increases. For the mathematical, I will explain that the numeral is the negative logarithm denoting the concentration of hydrogen ions in gram atoms per liter.

In regions having heavy rainfall, excess alkali is usually dissolved and carried away by the runoff. Semi-arid regions usually have alkaline soils. Calif. soils usually have too much unless cover crops or applications of humus, which are acid, have lowered the pH. Some Texas soils are too alkaline. The remedy is obvious. Apply humus, ground phosphate rock, or small, even applications of sulphur. Improve the drainage.

Chlorosis of plants, indicated by lighter green streaks of foliage, may not be due to a virus disease, in all cases. It may indicate lack of all required nutrients, some of which cannot go into solution in an alkaline medium. Among such nutrients are Nitrogen and Iron which are soluble only in acids. Mild acidity is usually best. Iron Chelate in minute quantities often corrects chlorosis. Be careful. It burns if too strong. Iron Chelate is now added to Spoonit.

Potting Directions. Use clean pots of the right size, neither too large nor too small. A 2½" Amaryllis, for example, needs a 6" pot. A 1½" Eucharis needs a 5" pot. Small bulbs like Ranunculus or Achimenes may have 3 to 5 in a 5" or 6" pot. Cover the hole at bottom with a piece of broken pot, concave side down. Above this place a handful of sphagnum moss to prevent the soil from sifting into and clogging the drainage material.

The drainage must be perfect and it is essential that the soil above this drainage be of a friable texture that permits water to pass thru freely. Only sandy soil will answer this purpose. Add enough sand so that it feels very gritty. The potting soil we like best is about 2 parts of peat or leaf mould and 1 of sand. If peat is used a little woods earth or pure rotted leaves and twigs may be added. Plain dirt, especially if clay is present, or any mixture that becomes lumpy when dry is likely to produce poor results. Mulch surface with wet sphagnum to prevent erosion when watering and too rapid drying at surface. Special directions are given for certain plants with the listing.

GARDEN REFERENCE BOOKS

Bailey's Cyclopedia of Horticulture. This 3-vol. set of over 3,600 pages describes almost every cultivated plant and has a wealth of culture information. Price \$52.00.

Hortus Second (Bailey). A concise Dictionary of Gardening. This 778-page volume lists and describes nearly every plant offered in catalogs; and some that are not in the Cyclopedia of Hort. It contains a few culture hints. Price \$13.50.

Amaryllis and How to Grow Them, by Peggy Schulz. This book was written for amateurs and by a well known amateur. It contains much useful information. 128 pages, many line drawings, photographs and two colored plates. \$2.95.

Bulb Magic In Your Window. 100 bulbs to grow in your window, from Achimenes to Zephyranthes. 214 pages. 3 color plates and 42 full page illustrations. Complete growing instructions. \$3.95.

House Plants for Every Window, by Dorothy H. Jenkins and Helen Van Pelt Wilson. Formerly Enjoy Your House Plants. An up-to-the-minute revision of "the most popular book on house plants ever written." Covers many plants for the window garden. A must for the Window Gardener. \$3.50.

African Violets, Gloxinias, and their relatives. A guide to the cultivated Gesneriads by Harold E. Moore, Jr. 5 color plates and more than 40 line drawings, illustrating nearly every species described, have been expertly prepared by Marion Ruff Sheehan to help the grower identify his plants. Never before has this ornamental family been so completely and artistically depicted. \$10.00.

The New Greenhouse Gardening for Everyone, Ernest Chabot. Important factors are noted, including correct temperatures for forcing plants, bulbs, and orchids. \$4.75.

How to Grow Rare Greenhouse Plants. A new book on greenhouse gardening by Ernest Chabot. Complete directions for greenhouse culture of 260 rare plants. Everyone having a greenhouse should have both books. 182 pages. Illustrated. \$4.00.

Geraniums, Pelargoniums, by Helen Van Pelt Wilson. 248 pages, 7 color plates, many drawings and illustrations. Best book on this subject. \$4.50.

Gloxinias, and How to Grow Them, by Peggy Schulz. Illustrated by colored plates and line drawings. Many Gloxinia relatives discussed, 128 pages. \$3.50.

Growing Plants Under Artificial Lights, by Peggy Schulz. 146 pages. One color plate and many illustrations. \$3.75.

Tuberous Begonias, by Worth Brown. Mr. Brown is one of our most important hybridizers and wholesale growers. His book is a complete guide for the successful growing and propagation, outdoors or as house plants. 128 pages, illustrated. \$3.50.

How to Grow African Violets, by Carolyn Rector. 62 pages, paper-board covers. Illustrated. How to grow from seed, prepare potting soils, pollinate and hybridize, control pests, diseases, groom plants for show and grow from leaf cuttings. \$1.50.

The Little Bulbs, by Elizabeth Lawrence. Learn the charm of growing little bulbs. Miss Lawrence is a dedicated gardener. She won the Herbert Medal for her book "A Southern Garden" in 1943. \$4.00.

How to Grow Orchids, by Cecil Houdyshel. This booklet has recently been revised and is now 12 pages (formerly only 10 pages). Price 50c.

Amaryllis Manual, by Hamilton P. Traub. Dr. Traub, editor of Plant Life, has long been regarded as a world authority on the botany and cultivation of the Amaryllis. Culture, ornamental uses, and many forms of the species are treated in detail in this first complete and scientific work. Accompanying appendices provide the botanist with all the information he requires for a thorough knowledge of this important group of flowers. Illustrated. \$7.50.

Camellia Culture, edited by E. C. Tourje. A compendium of the latest scientific practices described from their own experience by 55 of the country's leading research workers lists and describes nearly every plant offered in catalogs, and some that are not in the Cyclopedia of Hort. It contains a few culture hints. Price \$13.50.

Garden Supplies

Postage Extra is necessary on several items below. The weight when packed is given on these items. It is clearly stated that you must send the postage when you order. Here is how to find it. We are very near Los Angeles. Call your P.O. and ask the cost of postage on the packed weight given from your P.O. to Los Angeles and send us that amount. Orchids that are shipped in pots or baskets are sent by express f.o.b. The minimum cost is \$2.36.

Spoonit is recommended for African Violets and all house plants or in the garden. Analysis: nitrogen, 18%; phosphoric acid, 20%; potash, 16%; chelated iron. To use, dissolve level tablespoonful in 1 gallon water or level teaspoonful in quart. Apply every 3 or 4 weeks. Transplants half strength. It never burns. **Prices:** 6 oz. package 60c plus 11c postage. 15 oz. pkg., \$1.25, plus postage on 2 lb. (See paragraph 1 above.) 2½ lb. pkg., \$2.50 plus postage on 3 lbs. Try the new **Orchid Spoonit**, 1 lb. \$1.25 plus postage on two lbs. **Spoonit** can be furnished in a 5 lb. drum for \$4.50, f.o.b.

Blue Whale. 14 oz. liquid Blue Whale, 1.25 postpaid. Sea Rich, Blue Whale Peat Moss, Bantam bag (approximately 10 lbs.) \$3.25 prepaid. We have Blue Whale liquids in several sizes as well as the Peat Moss, at the nursery. No. 2 Bag of Blue Whale \$1.00 postpaid. **Blue Whale Planter Mix.** Based on The University of California mix Formula No. 5. 400 Cubic Inches. 89c plus postage for 3 lbs.

We recommend the use of both Blue Whale peat and the Liquid Fertilizer. Our potting mix is made up with ½ Compost, ¼ Blue Whale peat, ¼ washed sand, and enough Sponge Rok to give it good drainage.

Write to Lue Hale, The Friendly Gardener, Acme Peat Products of Canada, 687 No. 7 Road, Dept. E, Richmond, B. C., for the African Violet Flyer and for the Foliar Feeding Suggestions.

Flower Pot Tree Stand, black, sturdy, with saucers to hold 13 pots. \$8.75. **Table**

Model, holds six pots. \$5.00. **Brass**, \$6.50. **Black stand to hold 18 pots**, \$12.50. **Brass**, \$14.75. f.o.b. by express.

Plastic Pots. 2¼" starter pots 25c doz. \$2.00/100. 3", 50c doz. 100/\$4.00. Plus postage.

N.P.I. A new planter mix. 150 cubic inches, 59c, postage for 2 lbs. 600 cubic inches, \$1.59, postage for 4 lbs. A Nutrilite product.

Sphagnum Moss. Best we can get. 70c per lb. gross weight. Postage extra, for 1 lb.

Plant Labels. The following are plastic labels, easily written upon with pencil. **Pot Labels**, length 4½", 35c doz. Length 3½", 30c doz. 100, \$1.00. Small labels for **African Violets**, 2" long, 20c doz. 75c for 100. **Orchid Labels.** Perforated on one end, but without wire or cord, 2½", 30c doz. **Aluminum Tree Labels.** Emboss name on label with sharp pencil or ball point pen. Two sheets of aluminum make this strong and permanent, with wire to tie on, 35c doz. Package of 50, \$1.00 prepaid.

Wire Baskets. Our wire baskets are electrically welded, galvanized, non-rusting. The best obtainable. They look better, last longer than painted, soldered baskets and cost but little more. Price, with hangers, 8", \$1.00 ea., \$11/doz. 10", \$1.25 each., \$13.50/doz., postpaid.

Snap On Pot Hangers, for hanging any size pot. Galvanized. 35c ea. Send 10c ea. for postage. \$4.00/doz.

CATALOG ARRANGEMENT

is by Plant Families, according to their relationship.

In the following lists the **genus** (plu. genera) is mentioned first. After it, the species (phu. also species) or horticultural variety is named. The initial of the genus is used for the second and succeeding species. Thus A. will stand for *Amaryllis* or *Agapanthus* depending on the genus last named in full.

THE AMARYLLIS FAMILY — *Amaryllidaceae*

This Family includes the following bulbs, *Agapanthus* thru *Zephyranthes*.

Agapanthus, Blue Lily of the Nile. They flower here in June to Aug. In the north they must be grown in large pots or tubs and wintered in a frost free room. Plant in full sun exposure in any good sandy garden soil that drains well.

A. orientalis. Dark blue. Larger than *longispathus*. Superior clone. \$1.00.

A. orientalis. Sky, Blue. 75c.

A. orientalis. Dwarf blue. \$1.25 each.

Amarcrinum Howardi. Bigeneric hybrid of *Brunsvigia rosea* and *Crinum moorei*. Beautiful, fragrant, pure pink fls. Fall bloomer. Culture like *Crinums*. Hardy to So. Indiana. Large bulbs. \$2.50 and \$1.25. Special, small 1.00.

A. Dorothy Hannibal, a Les Hannibal origination. Like *Crinum Cecil Houdyshel* it flowers in all seasons. The flowers are a very pretty pink. New low price. \$4.00.

Amaryllis are the easiest, the most showy and popular of all bulbs for growing in pots. Equally desirable for southern gardens where they are hardy along the east coast to N. Car. and on the west to Vancouver. In the middle section they may be grown as far north as Ark. and Okla., but note special directions for colder sections.

How to Grow Amaryllis. In the garden, in the deep south where temperatures go only a few degrees under freezing, *Amaryllis* bulbs need to be covered only about an inch or two. Farther north they may be planted deeper in protected places and mulched with straw, leaves and/or brush. In Okla., a customer reports a depth of 4" with mulch is safe. Try our "Hardy Hybrids." *Amaryllis* must not be planted close to trees, shrubs or large vigorous plants, whose roots compete and take the moisture. Irrigate frequently. Rain is seldom enough. The most common error is lack of sufficient moisture. They are endemic to the tropics and in many cases, where there is almost daily rain. The soil should contain much humus. Add well rotted manure and if not slightly acid, add some peat but do not acidify the soil with sulphur or aluminum sulphate.

In Pots. A 2½" bulb requires a 6" pot. Give a 3" to 3½" bulb a 7" pot. Remove dead roots but every vestige of living root should be left on. Our best success in flowering Amaryllis and in growing them on to larger, better bulbs, is in a soil mixture composed of clean, sharp sand one part by volume and a mixture of pure organic material two or three parts. The latter may be pure peat or about half peat and half well broken up or decayed leaf mould, woods earth or completely reduced compost. The final mixture should have enough sand to feel very gritty. Such a mixture drains quickly but retains enough moisture around the roots.

To this mixture we add a tablespoon of bone meal and a level teaspoon of blood meal for each 6" pot. This is enough fertilizer until after bulbs have flowered.

The neck and about ½ of bulb should be above soil surface. This surface should be ½" below pot rim. In potting carefully spread out all living roots as they are a great advantage to bulbs. Such bulbs will start more quickly and may be given a warm temperature at once. If there are few or no living roots on bulbs, set them first in a cool place, about 50°, for roots to form and growth start.

We water at once and again when growth has started. With mixture above advised, one is not likely to over water tho you should be a little careful at first, if the bulb had no living roots. For as long as they will grow, potted Amaryllis need frequent watering. They are not only heavy drinkers but gross feeders. If you give liquid manure or Spoonit every 3 weeks, it will be about right. It is also good to vary the diet. Try Blue Whale.

Amaryllis like the sun. If the foliage fades the sun may be too strong or you may not be watering enough. In the house, give them a sunny window. Keep the bulbs growing vigorously until fall, Oct. or Nov. When outer leaves begin to go down, buds have been formed for next season's flowers and bulbs may be dried off and stored in a cool place. Inspect frequently. For early flowers, dry off about Nov. 1, or earlier.

A. bifida. Formerly known as *A. advena*. **Ox-blood Lily.** This is a fall bloomer. Hardy to So. Ind., Ill., Mo., Kansas, etc. There are 5 to 8 dark red fls. in an umbel. Sam Caldwell of Tennessee says these bulbs make a fine pot plant. Special, 35c ea. 3/\$1.00. \$3.50 doz. Smaller blooming size, \$12.50 per 100. f.o.b.

Amaryllis Hybrids. The H & S strain is considered to be the best American strain. **Assorted Colors.** 90c ea. 3/\$2.50. 6/\$4.75. 12/\$9.50.

Hardy Hybrids. These are not hardy outdoors in the colder states but as far north as North Carolina, Washington, D.C., and Oklahoma these have proven winter hardy if covered by 4" of soil and given a good winter mulch of straw. 75c ea., \$7.00/doz. Large, \$1.00; \$10/doz.

Dutch hybrid Amaryllis. We have the very best of the Van Meeuwen's *Superiora* named varieties for you this fall. The bulbs are large, give 3 stems as a rule, nearly all varieties bear 4 flowers on each stem. The wide flowers are flat. These lovely flowers smile at you in their full brightness while you look in their hearts. These are prepared Amaryllis to assure you early flowers. These are jumbo bulbs.

Albino. Pure white, a little green in the throat, large flat flowers. Very free flowering. This variety will please everybody who loves white Amaryllis.

Alcyone. Dark violet-red, very free flowering. Crinkled petaloid ears twist together. Without any doubt this variety is the very best in the deep dark red color.

Charlemagne. Purplish red, very large flowers. A real giant.

Giant Goliath. Deep vermilion, enormous flat faced and star shaped flowers, mostly 3 flower stems bearing 4 flowers each. This variety has an amazing ability to reflect light, resulting in a glossy bright sheen. Like Hollywood's term "Super-colossal." This variety caused a traffic mass at the Keukenhof Exhibition, 1958.

Hellas. Light brick red with large white center. Broad white stripe on each petal, giving the impression of a red star with white center. Very free flowering, 4 to 6 blooms per stem.

Queen of the Pinks. Beautiful soft Camellia pink, very free flowering. Produces 2 to 3 stems bearing 4 perfectly shaped flowers each. This variety is without any doubt one of the best pink varieties available at the present time.

Queen Superior. Excellent dark red. Large flat flowers, very free flowering, growing more beautiful each year. No Amaryllis collection is complete without this lovely variety. One of the best.

Zenith. One of the best novelties. The 3 lower petals are white, the 3 upper petals are deep rose from the edge down going over into the white center. Large flowers, always 4 per stem. Excellent keeping flowers. A splendid variety.

Price \$7.50 each. Eight, value \$60.00 for \$54.00.

Dutch Hybrid Amaryllis. Same large bulbs specially prepared by color only. White, Dark Red, Pink, Orange, Variegated. \$4.50 each. One each of the five colors value \$22.50 for \$21.50.

Dutch Hybrid Amaryllis, lost labels, as well as some named sorts for \$3.75 each our selection. These are all good varieties but in too small numbers to list separately.

Amaryllis gracilis. This is a new strain of hybrids. These are smaller plants and flowers. \$5.50.

A. striata var. fulgida. Species. Exquisite star shaped flowers. Peach red with chartreuse star center. The bulbs are naturally small. \$5.00. We have small bulbs for \$2.00.

A. Lady Grant. Very pretty pink and white striped flower. Broad leaf, white rib through center of leaf. Only a very few of these rare bulbs. Small bulbs. \$10.00.

Clivias have evergreen, strap-like foliage somewhat resembling that of Amaryllis. The orange flowers are produced in umbels of 10 to 25 in March and April.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced $\frac{1}{2}$ " apart, and in garden under Avocado (evergreen) trees, directly in the soil as they are often grown in Calif. When grown thus they will make very large clumps. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well watered after flowering, all summer and fall. Liquid fertilizer occasionally helps. When growth ceases in late fall rest them by giving them less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperatures from above 32° to not much over 50°. Pots should be 6" to 8" for small plants and up to 12" for larger. As they grow and increase, do not divide but shift to larger pots. Drainage must be perfect. Potting soil as described under "General Culture Directions." pH 7 is about right. One cannot guarantee a Clivia to flower the first year after moving tho they usually do.

The foliage of our Clivias, grown outside in the ground will not be as perfect as that of pot grown plants. But when potted, they replace the old foliage in a few months and become specimen plants.

Clivia miniata. Wide open soft yellow orange fls. \$1.00, \$2.00 and \$2.75. Only the \$2.75 is likely to flower.

C. cyrtanthiflora. The flowers are tubular and long, yet they are so numerous that they fill a large umbel and make a beautiful floral display. They are distinctly different from other Clivias also in their time of flowering. There is not a month in the year when we do not sometimes have flowers. Price \$10.00.

C. European Hybrids. The large flowers have well rounded petals of red-orange and the wide leaves are ornamental. This is the most desirable of all Clivias. Selected fine large plants, blooming size, \$6.50.

Crinums. Most Crinums are large bulbs and plants tho a few are no larger than an Amaryllis. They are very popular in the south and are a common sight in southern gardens. Among trees and shrubs they are indispensable.

Culture. C. bulbispermum is hardy in the north, but there it should be planted 6" or more deep and mulched in winter. Crinums moorei, Cecil Houdyshel and Powellii Alba are equally hardy.

The ideal situation is among trees and shrubs, in a sandy soil but all except moorei can be grown in full sun exposure and in heavier soils. There should always be much

leaf mould and peat incorporated in the soil—especially if heavy. The alkaline California soils need the addition of peat for growing *Crinums*. If your *Crinum* foliage becomes blotched with lighter green, as in the case where plants are infected with mosaic disease, the addition of much peat to the soil will lower the pH and probably cure the plants.

Crinums succeed in large pots or tubs but most of them require too much space for house or greenhouse growing. Tubs can be stored over winter and set outside in summer. In the south the bulbs may be planted very shallow. Keep always wet when growing.

C. bulbispermum. We have sold this as “capense,” then as “longifolia” but botanists give priority to the present listed name because first given. We have alba and rosea, 50c. Good blooming size, \$1.00.

C. Cecil Houdyshel. Flowers deep rose pink. One of the best hybrids, all qualities considered. It has the same parents as *C. Powellii*. Instead of flowering only once, like *Powellii*, this hybrid has been known to give 12 or more flower scapes in one year. A large clump will give continuous bloom from spring to fall. It is hardy as far north as Independence, Mo. If planted 8" deep (to bottom of bulb) and heavily mulched over winter it has survived 10° below zero.

Prices reduced. Blooming size, \$1.00. Large, \$2.00. Jumbo bulbs, \$3.00 each. They increase very rapidly and a jumbo size soon makes a large clump.

C. Ellen Bousanquet. Large, glowing, dark wine red flowers. A very beautiful *crinum*. \$1.00 and \$1.50.

C. Elizabeth Traub. Origination of Dr. Traub. It was obtained by crossing *C. scabrum* and *C. Ellen Bousanquet*. The flower color differs a little from the latter and the plant is much more sturdy. It makes offsets more freely. The culture is much easier. Those interested in *Crinum* breeding should try crossing this on *C. Cecil Houdyshel*. The latter makes a few seed and it can be done. \$3.50. Small \$1.00.

C. Erubescens. Milk and Wine Lily. Red purple center stripe on petals. 75c to \$1.50.

C. H. J. Elwes. Pink, very beautiful. Does not make large bulbs. Small plant more suitable for pots. Tender. Med. \$3.50.

C. kirkii. One of the most desirable of “Milk and Wine” type. White flowers with red center stripe. The large umbels have many flowers open at one time. \$1.25.

C. latifolium. This species is usually known in horticulture as *C. yemense*. The pure white flowers are very large and attractive and fittingly adorn an unusually attractive plant in June to July. \$3.00.

C. Moorei. Large pink, bell-shaped flowers in the fall, freely produced. The long neck of the bulb surmounted by rotated leaves gives the plant great decorative value. Requires shade. Nearly as hardy as *bulbispermum*. \$1.00 and \$1.50.

C. Peach Blow. Exquisite large pink flowers. Free flowering from largest bulbs. A valuable hybrid. \$6.50. Probably tender.

C. Powellii alba. Extra fine pure white. One of the most valuable and beautiful *Crinums*. Small 50c. Good blooming size \$1.00. Largest, \$1.50.

Elisena longipetla. Very rare and lovely Peruvian amaryllid. It is related to the *Ismene* but the pure white flowers are far more delicate and graceful. Culture like *Ismene*. It can be forced in pots or grown in the garden in summer. Bulbs stored over winter like Glads. It is hardy in the middle south. It may be crossed with *Ismene*. \$1.50.

Habranthus bloom several times a year and at most any time. Culture like *Amaryllis*. After good growth, if allowed to get rather dry for a period they will usually flower after a good watering. **H. robustus**, pink lavender, 50c ea. \$5.00 doz.

Haemanthus. The Blood Lilies of South Africa. So rare that few have seen them.

Culture. Hardy only in almost frost free climate like So. Calif. or Fla., if temperatures do not go below 24° at night. They do well in pots anywhere. The soil should be as for *Amaryllis*. They should have about half sun exposure. Pot with bulb only lightly covered.

Haemanthus produces red fruits containing seed. The flowers require hand pollination which may be done by rubbing palm of hand over the flower umbel when pollen is ripe. This spreads it to the pistils. Do this frequently as flowers do not all open at one

time. Thus many valuable seed may be produced. Do not gather until quite red. When ready to plant, remove outer pulp and plant by pressing seed down slightly into soil but do not cover. One may plant in large clay pans and covered by pane of glass. Thus no watering may be needed until most of the seed are started. Growth begins by emergence of a radicle which will penetrate the soil. If soil is not loose, it may need help. A small bulb will form on tip of radicle and will later send up a leaf. Species are easily crossed to produce hybrids if anthers of mother plant are removed before ripening of pollen. Store pollen in advance in small stoppered glass phials, in refrigerator at 45°.

H. coccineus. The true Blood Lily, altho all *Haemanthus* are known as Blood Lilies. The umbel of scarlet or blood-red flowers comes in late Aug. to Sept., after a 3 months dormancy. Two long semi-erect leaves follow the flowers and remain green thru the winter and early spring. The scape is attractively marked by red spots on a bright background. Flowering sizes, \$2.00 and \$3.00. Extra large, that should give two scapes, \$4.00.

Order now and we can deliver about June or July.

H. Katherinae has been called the most beautiful of flowering bulbs, in both foliage and flowers. The umbel of bright red flowers is often 10" in diam., often there are 125 or more flowers. The broad leaves spread from the top of a 10" stem making this a very attractive plant, for a 7" to 9" pot. Flowers usually in June or as late as Sept. In Jan. or later the green top bends over, the neck splits and a new growth emerges. Price \$5.00.

H. multiflorus. In general appearance, it resembles *Katherinae*. Stem heavily spotted brown. This species is ideal for pots as it is more tropical and more tender. Blooms earlier. Flowers are described by botanists as blood-red but you may disagree. Blooming size, \$5.00.

We ship *H. Katherinae* and *H. multiflorus* as soon as safe to mail.

Ismene. Their large, very fragrant, white flowers are very desirable for cutting and are seen often in florists' shops. The flowers are about the size of daffodils and because there is a cup in the center, they are often called "Peruvian Daffodils."

Culture. They are hardy only in the south. With deep planting they may be grown as far north as the Carolinas, where they should be covered by 5" of soil and well mulched in winter. Probably safe to leave the ground in Oklahoma. In the north, plant in the garden in early spring and after frost cuts down the tops, dig and dry the bulbs well, then store at a temperature over 55°. If too cold in storage the bulbs will not flower and they may rot. Even in the south they must be covered by 4" of soil. *Ismenes* can also be grown in pots. See also their close relative, *Elisena*.

Ismene calathina. Type variety. 35c. Special price, \$2.00/doz. 100 for \$12.00 f.o.b. express.

I. festalis. An *Ismene-Elisena* hybrid. Pure white, no green markings. Long, narrow petals give great refinement and beauty to the flowers. No white *Amaryllid* is more elegant. The true variety, \$2.75.

I. Olympia. The giant among *Ismenes* and it is magnificent. The huge flowers are tinted yellow when first opened. Bulbs become very large and propagation is slow, hence they are expensive. Price, \$2.50, for blooming size.

I. Advance. Improved form of *Calathina*. \$1.00.

Lycoris albiflora. Large white fls. with color markings. Almost hardy. 75c.

L. aurea. Golden Spider Lily. One of the most beautiful of all bulbs. Not hardy except in deep south. 65c. 6, \$3.75. 12, \$7.25.

L. radiata. Red Spider Lily. Hardest of these listed above. Hardy to So. Kans. Deep coral red. 25c. 5/\$1. \$2.35 per doz.

Nerine Bowdenii, var. Pink Beauty. Has larger, finer flowers and flowers much later, usually in late Dec. or early Jan. Multiplies rapidly yet we can seldom have enough stock to list. \$2.00 each.

N. Bowdenii, var. Magnifice, very fine improved *Bowdenii*, similar to *Pink Beauty* but flowers earlier. Extra special price, \$1.00 ea.

Lycoris and *Nerines* will be delivered late spring or summer when ready.

Sprekelia formosissima superba. Orchid *amaryllis*. Deep crimson flowers in orchid-like form. Much larger than common type, better color, more flowers. Evergreen. Fine

in pots. Culture like *Amaryllis*. 50c ea. 3/\$1.25. \$4.50 per doz.

Tulbaghia violaceae. Mauve flowers produced thruout the year, a true ever-bloomer. Foliage has garlic odor if bruised. An acquisition for pot culture. 25c ea. \$2.00 per doz.

T. cepaceae. Superior clone buds are a deeper color than violaceae and flowers more freely. 35c ea. \$3.00 doz.

T. fragrans. This species has a large, true bulb, with glaucous green foliage, 18" long and 1" wide. It has no allium odor. The plant is a profuse winter bloomer in a cool room with a few flowers in summer. It has larger fragrant flowers than violaceae, in the same color. Evergreen. Special price. \$1.00, 3 for \$2.50.

Vallota purpurea. Scarborough Lily. Large funnel shaped, scarlet flowers in late fall. Slightly difficult for inexperienced gardeners but very desirable. Grow in pots same soil as for *Amaryllis* with bone meal added, and top of bulb covered by 1" of compost. We can't guarantee our bulbs to flower this fall or at any time. Suggest you feed them with Spoonit or Blue Whale fertilizer. They are evergreen and must not completely dry off in winter. House or greenhouse culture is advised. They are a challenge to your gardening ability. They like to be crowded in pot. Price \$6.50.

Zephyranthes. Fairy lilies. The smallest *Amaryllid*, 6"-12" tall. Fine in beds or borders. Hardy in middle south. In north, dig and store. They may be grown in pots. Give acid soil, sandy loam with leaf mould or peat. Full sun or slight shade.

Z. candida. Pure white, evergreen. The masses of white flowers in late summer make them outstanding in a bed or edging for border. Half hardy and easy in pots. 2 for 25c. \$1.00 per doz. 100, \$5.00.

Z. sulphurea. Deep yellow. 20c ea. \$2.00 doz.

The *Alliae*, or Onions, are now classed in *Amaryllidaceae*. The following are ornamental and useful for seasoning salads, soups or meats.

Allium Giganteum. 4 ft. tall, lvs., two inches wide. Flowers bright lilac, in dense globose umbels 4 inches across. \$2.85 each.

A. karataviense. Purple, with broad leaves. 15c ea. \$1.50 doz. Order the above two before Feb. 15.

A. ostrowskianum. Deep carmine rose. Dwarf. 10c ea. 65c doz.

A. tuberosum. Japanese Garlic. Deliciously flavored leaves. Evergreen and probably not hardy in north. Sm. 2 for 25c. Large 25c ea.

IRIS FAMILY — Iridaceae

The Iris is the type genus of this family. Bearded Iris and *Gladiolus* are the outstanding members. Maricas are lovely and curious house plants, truly "out of the ordinary."

Tall Bearded Iris. No garden is complete without Bearded Iris. When in flower call at our gardens and pick out colors you want. **Special Offer.** If you do not care for names, we offer surplus rhizomes, 20 to 30 var., no labels, 100 for \$8.00, f.o.b. express. If by mail, send postage for 12 lbs. **Collection** of 10 fine varieties, labelled, our selection, \$2.50. 20 varieties, labelled, \$4.50.

I. Spuria. Assorted colors in mixtures only, blue, bronze, yellow. 35c ea. 3/\$1.00. Special, \$2.50 doz. 100 by express for \$10.00.

Diets. This genus belongs to the *Moraea* tribe, they differ from *Morea* in having a rhizome similar to Bearded Iris and sword-like leaves. Flowers are very much like those of *Moraea*, borne on long wiry stems thruout summer into winter. **Culture** like Iris. Plant early. Not hardy in north but are successfully grown in tubs that are removed to light basement in winter.

D. iridiodes Johnsoni. A robust growing plant very popular locally. Flowers are large, pure waxy white with orange and brown signal blotch and large lavender style branches. 75c ea.

Tigridia pavonia. Mexican Shell Flower. Beautiful tri-petaled flowers assorted colors. Exotically marked in contrasting colors. 3/30c. 12/\$1.00.

Gladiolus

How to Grow Gladiolus. Glads planted Nov. 15 to Mar. 1 in Southern California and thruout the south (a little later in Northern California) and early as possible in spring in the East, are reasonably sure to escape the attack of thrips. Plant early. Keep them reasonably moist and well cultivated, with no weeds. Dust with Chlordane when about 6 inches tall. Dust three or four times before flowering. Plant large bulbs (corms) 4" to 5" deep. Twice their diameter apart. Rows 20" apart, in full sun exposure. Best soil is sandy loam but they do very well in heavy soils, especially if leaf mould and compost are added. Alkaline soils do not produce good Gladiolus. Correct them by addition of peat or leaf mould. Use only well decayed manure, if any. Spoonit is an excellent mildly acid fertilizer or Blue Whale.

New **All American Gladiolus.** Every garden should have these new Glads as well as the older varieties. Three new 1962 introductions.

Ben Hur. 1962. Ruffled Rose pink.

China Blue. 1961. Soft blue deeper at tips, lighter in throat.

Gypsy Dancer. 1961. Vivid fiery orange with yellow on lower petals.

Horizon. Rose lavender. 1962.

Rusty. 1961. Giant smokey-bright red mark on lip silver picotee.

Thunderbird. 1962. Ruffled fiery deep persimmon.

Prices. No. 1 bulbs. 35c ea. 3 for \$1.00. 12 bulbs for \$3.65.

Miniature Butterfly Gladiolus. New. Small Dainty flowers. Very popular for picking for the house.

Elf. Apricot, scarlet throat on yellow blotch, frilled.

Melodie. Salmon pink with orange scarlet blotches.

Rendezvous. Clear orange scarlet.

Summer Fairy. Reddish salmon, reddish maroon throat.

Topolino. Golden yellow, scarlet throat.

Walt Disney. Primrose with large scarlet blotch.

Prices. No. 1 bulbs. 2 for 30c. 6 for 80c. 12 for \$1.50.

Miniature Gladiolus. Like a miniature carving, a cameo or fine lace, they are dainty, beautiful and alluring. Fine for cut flowers. All are good blooming size bulbs. Mixed colors, \$1.00 doz.

Firebrand. Fine blood red with a faint blue cast to it. 10c ea. 75c doz.

Florence Nightingale. Outstanding white. 10c ea. 75c doz.

Friendship. Beautiful early rose, light throat. 10c ea. 75c doz.

Gold. Deep golden yellow. One of the best. 10c ea. \$1.00 doz.

Greenlight. The pale green of this flower with darker green of buds make a striking Glad. 15c ea. \$1.45 doz. 100/\$8.75.

King David. Deep purple, velvety red throat, light picotee edge. Heavily ruffled. 8 to 10 open. The finest of this color. 10c ea. \$1.00 doz. 100 for \$7.00.

Myrna Fay. Very early Lavender. 10c ea. 75c doz.

Sweet 16. Early. A favorite medium sparkling pink. 10c ea. 75c doz.

Assorted varieties. Good flowering size, 60c doz. 100/\$5.00.

LILY FAMILY — Liliaceae

The type species is *Lilium*, or true Lily. Many call *Crinum*s, *Callas*, *Cannas*, or any bulbs "Lilies," but this is an error.

Gloriosa. Climbing Lily. The flowers resemble true lilies but surpass most of them in their gorgeous beauty and high coloring. They propagate by tubers instead of bulbs. The stem is branching and heavy and must be supported. Small tubers flower but the larger ones will give 2 or 3 times as many. They also make larger, more showy plants.

Culture. They must have the good drainage of very sandy soil, to which it is advisable to add peat liberally. Leaf mould will do, but it is not quite as good. If soil is heavy, dig out to a depth of 1 ft. and fill with 1 part top soil, 3 parts coarse sand and the peat.

Plant tubers as soon as weather is quite warm in a horizontal position, 3" or 4" deep and mix a liberal portion of peat with soil close to tubers. Gloriosas prefer full sun exposure but will do well in slight shade. They like heat and abundant moisture. Lack of either will slow them down. We recommend only outdoor culture.

Gloriosa rothschildiana deserves the name **Glory Lily**. Very vivid colors, red with yellow markings turning later to deep red, in a true lily form. Flowers are long lasting and are used in corsages. Plant 4 ft. tall. Prices, small blooming size tubers, \$1.00, larger sizes that produce larger plants and more flowers at \$1.50, \$2.50.

OXALIS FAMILY — Oxalidaceae

There are three types, Winter growing, Summer growing and Evergreen. The following are winter growing and blooming or evergreen. Oxalis are the brightest and most vivid of winter flowers for a sunny window or in outside beds in the deep south, where temperatures do not go much below about 26°. They give a profusion of bloom over several months time. They need a cool room.

Culture. Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little deeper. In pots, the smaller may go 6 in a 5" pot. They need full sun exposure and do best in a very sandy soil, rich or poor. Flowers close at night and on dark days. Tuberous rooted species start very slowly. Keep them moist and be patient.

Oxalis adenophylla, lilac rose. 15c ea. \$1.50 doz.

O. crassipes. Tuberous. Bright rose flowers. Evergreen and everblooming. Tuberous rooted species start slowly. Keep moist. 15c ea. \$1.25 doz.

O. brasiliensis. Bright magenta fls. Starts growing in winter and continues to late spring. Bulbs 35c.

O. hedyсарoides rubra. Firefern. A shrubby type bearing large yellow flowers. This is a most colorful plant in that the large leaves are satiny wine-red in color, and attracts instant attention. It is also sensitive to touch much like a sensitive plant, but instead of leaves closing up, these open out wide. It is a must for any collection of house plants. \$1.50.

O. lasiandra. The prettiest summer Oxalis. 5 to 10 leaflets. Bright rosy crimson flowers. 2 for 15c. 75c doz.

THE CALLA LILY FAMILY — Araceae

This family contains the so-called Calla Lilies or Zantedeschia, Fancy Leaf Caladium, Sauromatum, Amorphophallus, Arum, Drunculus, Anthurium, Spathiphyllum, etc. All are shade plants and need acid soil.

Zantedeschias are not true Callas, tho this is their common name. **Culture.** Colored Callas, Zantedeschia elliotiana and Z. rehmanni elegans may be potted or planted in the garden in almost frostless deep south. If the rest period, when the enzymes of bulbs and tubers are changing the stored starch into sugar, is too short, planting in cold wet soil may cause them to rot. When a bulb, corm or tuber is ready to grow, there will be root knobs on the base and top growth started.

A soil of peat and enough coarse sand to feel very gritty, as described for Amaryllis is good for most of the Araceae. Note exception as to Anthuriums and Spathiphyllums. Fertilize with Spoonit or manure water. In pots, cover only 2" but in the ground in Calif. or the deep south, they may be planted about 3" deep. They need about half shade. Keep barely moist until growth is well started, then water freely. Cool temperatures suit them best. Hardy outdoors in S. Calif.

Z. rehmanni elegans. Improved light pink form. 45c each. 3/\$1.25.

Z. elliotiana. Deep golden yellow. If not given enough sun they become tall and spindling and fail to flower. 35c ea. 3 for \$1.00.

Sauromatum venosum. Lizard Lily. The long, serpent like spathe wriggles along on soil surface. I've seen persons jump, at their first look. Soil and culture similar to Zantedeschia. Large tubers, \$1.50 and \$2.00. Medium, \$1.00.

Fancy Leaf Caladiums are the most gorgeous of foliage plants. Every leaf is a flower as vivid in color as a rose. We have selected for you 12 of the most beautiful, we think, this year. **Culture.** The Caladium is a tropical plant and naturally grows best in very warm temperatures, 70 degrees or more. They are heavy feeders and seem to grow best in a soil with a pH of 5.5 to 6 and with sufficient organic matter to prevent its packing and sealing to the point of locking out air circulation. The pot soil should be loose and fluffy even after continuous and frequent watering during the growing period. A mixture of equal parts of coarse sand, peat or leaf mold, and dairy manure has been found satisfactory. Caladiums should be started in moist soil, or peat. After roots have started more water should be used. As the plant develops and the leaf area increases, more water is thrown off by the leaves and more water will be required, but the soil should never contain sufficient water to "water-log." Constant watering will tend to leach the plant food from pot soil so it will be desirable to feed the plants periodically. Use Spoonit for a good fertilizer.

The popularity of these spectacular foliage plants has grown in recent years. They provide breath taking beauty in the garden or indoors for several months.

Ann Greer. A large round leaved red. Medium leaf producer. Low growing.

Bing Crosby. New. Large white heavy textured leaf, red veins with forest green border. A strong grower.

Candidum. Standard white, very popular, snow white, green veins and network, good in any situation.

Fire Chief. New. Brilliant deep rose center, light green border with rose splashes, black stems. Very good.

Grey Ghost. Medium sized leaves of ivory white mottled and splotted all over apple blossom pink. Very beautiful.

June Bride. The whitest of the whites. It is low growing.

Lady in Pink. New. Beautiful dark melon pink leaf with slightly darker pink veins and midriff, Christmas green narrow border. Low bushy plant, slightly transparent.

Miss Marveen. White suffused with delicate pink and occasional rose pink splotches. Very low growing and good leafer.

Mrs. F. M. Joyner. A very colorful new white. Red veins and border, vigorous.

Pink Blush. New. Slightly waxed frosted pink leaf, moss green veins and dbl. line border with netted green lines throughout, slightly transparent. Low bushy plant, gorgeous.

Sorocoba. Has a suffusion of delicate pink over white. A good leafer.

White Queen. New. White to grey background, vivid lipstick red veins, netted with green lines throughout and double green line border with white between. A splendid pot plant.

Prices. 50c ea. or complete set of 12 for \$5.40. These are No. 1 bulbs labelled.

Caladium Lance Leaf varieties. These are new varieties with narrow pointed leaves. Very beautiful.

Cinderella. A white lance leaf with occasional green mottles and vermilion splotches. Interlaced with minute pink dots, lots of leaves. Very beautiful.

Little Rascal. Low growing heavy textured leaf. Very rich wine red color. Beautiful beyond description.

Pink Glow. Fine red veins, melon pink leaf with narrow green border and some lighter pink specks. Slightly heart shaped lance lf. 50c each. One each 15 varieties, value \$7.50 for \$6.75.

THE GESNERIA FAMILY — Gesneriaceae

The Gesneriads listed here are tropical or semi-tropical. They are strictly house plants outside of the tropics. Most of them are for the warm house. All are either tuberous rooted and deciduous or fibrous rooted and evergreen.

Culture. The soil may be one part by volume of sharp, coarse sand and 2 parts peat or peat and leaf mould. Add 1 tablespoon bone meal for a 6" pot. Mix thoroly. Set tuber

a little under soil surface concave side up and mulch with ½" wet sphagnum. Last of all water until a little runs thru at bottom. These are tropical plants. The best starting temperature is at least 80°. They will start, but a little more slowly at 70°, with 60° or over at night. Keep soil moist and they can be in full sun until foliage appears, then slightly shaded. The plants need good light and more sun than most Gesneriaceae. Leggy plants result from insufficient light. The secret of producing good Gloxinia is in frequent feedings. We use Spoonit.

Gloxinias. Improved California grown. 1½—2" tubers, in the following sorts: **Brown's Red**, fine flexible leaved variety; **Crimson Rose**; **Emporer Frederick**, scarlet with white throat; **Etoile de Feu**, scarlet; **Prince Albert**, dark violet; **Princess Elizabeth**, blue with white throat; **Roi des Roges**, dark crimson; **Tigrina Pink**; **Tigrina Wine**; **Violacea**, soft violet. 50c each. One each of the ten listed \$4.65. \$5.00 doz.

Aeschynanthus (Trichospornum). (Lipstick plant). This is a nice trailing, almost woody vine. In nature, they are epiphytal and climb trees. The plants are attractive and the freely produced large flowers are tubular and vividly colored.

They are tender tropicals and shipment will be made only when weather permits. We grow them in wire baskets, lined thickly with sphagnum and with peat and sand in center. They do well in pots. They require constant moisture. Leaves and flowers drop when dry. **Aeschynanthus lobbiana** has scarlet fls. in a purple calyx. \$1.25 postpaid.

Rechsteineria cardinalis. Delightfully green slightly hairy, heart-shaped leaves, and long, curved flowers, borne in profusion, in the brightest of scarlet. Blooms resemble a Parrot's beak. May last longer than those of other gesneriads. Grow like Gloxinias with lots of light. 75c ea.

R. leucotricha. Brazilian Edelweiss. This new species may grow up to a very large bulb. Stems arise from the bulb and carry two or more flowers. The leaves are densely covered with white hair, and continue to grow for some time after the flowers are gone. \$1.25 each.

Episcia. They are very tender plants. We ship about May. **E. Acajou.** Dark bronze with wide silvery green midrib. **E. Chocolate Soldier.** Dark chocolate with narrow silver midrib. **E. Dianthiflora.** This is a vigorous grower with small green leaves and white flowers with fringed petals in spring and summer. **E. Ember Queen.** Dark green with silvery green midrib. **E. fulgida.** (Flame Violet.) Medium bronze with silvery green veins. Lovely red flowers—but not a violet. **Price.** \$1.00 each. One each, \$4.65.

Columnneas. Are epiphytic climbing vines, having large, vivid red flowers. They may be grown in pots, soil similar to that of other Gesneriads. **C. gloriosa.** **C. Araguda.** \$1.00 each. 2 for \$1.90.

Achimenes have been popular plants for a very long time. They are not too hard for the average amateur. The plants and the flowers are diverse in size and form and one should plant a number of varieties.

Culture: From 1 to 5 tubers may be grown in a 5" pot. The compost in pots may be the same as for Gloxinias and other Gesneriads. Protect them from winds or even strong drafts. It dries them out too much and the compost should never become dry. They need about the same sun exposure as Gloxinias. They like frequent feeding. **Achimenes.** Assorted 15 for \$1.00.

Smithiantha. (Naegelia) are fine, tuberous rooted, foliage plants. The rounded cordate leaves are covered by soft hairs that give a velvety appearance and cause them to change colors when viewed at a different angle. The showy flowers are long, tubular and in pink and orange shades. They should not be too deeply shaded nor ever become dry. We send when dormant in the summer. Plant at once.

Smithiantha cinnabarina. Gorgeous dark red velvety leaves, cinnabar red flowers. **S. Orange King.** Rich red colors of leaves are changeable as viewed at different angles. **S. Yellow Hybrid.** \$1.00 each. 3 for \$2.75.

AFRICAN VIOLETS — Saintpaulias

Few would question the statement that African Violets are the most popular house plant at the present time. They fit perfectly into the modern smaller homes and rooms, where things are fixed or built in. Every convenience in a small space. They may be grown in an east, south, west or north window or even the basement if given artificial lighting and correct temperature. See under Garden Reference Books, Growing Plants Under Artificial Lights.

They win favor because of their daintiness and beauty, their everblooming habit, their diversity in foliage, flower color and form. The introduction in 1955 of double pink varieties, for the first time have enhanced their popularity. There seems to be no limit to their possibilities in the hands of breeders.

Start leaf cuttings. A good many growers start cuttings in water. We believe a better way is to start in terralite (a fine grained form of vermiculite), keep moist and in good light but no sun. Long distance shipments should go by air, the same as for plants. If leaf is wilted, soak 2 hours in water or until leaves are fresh looking.

We have a number of new varieties to offer this spring both in plants and leaves. Some are in small quantity, so please give us a few substitutes or tell us we may substitute. We always send something just as good or better.

Sales Tax. Californians must include 4% Sales Tax. Out of state customers sending plants as presents to a California friend must also pay it. Please read "Terms and Instructions for Ordering," and comply on all points.

Please add 50c toward postage and packing. If wanted by Air Mail or Special Delivery you must pay for this. Estimate cost and promise you will send the difference if not enough.

For prices on plant stands, pots and other supplies for growing African Violets please see "Garden Supplies."

Ann Bly. New. Huge bright pink star, heavy ruching. \$1.25.

Artists' Touch. New fall 1961. Large full deep purple double with painted white edge on bronze foliage. \$2.00. Sm. \$1.00.

Arctic Night. Plain leaves. Large double dark blue. \$1.25.

Betsy Ross. New. Huge deep pink double, soft girl foliage. Award winner. Small \$1.00.

Black Cherry. Dark leaves. Deep maroon double. \$1.25.

Blooming Fool. Very heavy flowering, medium blue double. \$1.25.

Blushing. Pink and white double. \$1.25.

Blushing Beauty. Lovely white or cream single with pink edge. Wavy lvs. \$1.25.

Brides Waltz. Double white. \$1.25.

Breathless. Holly leaves. Fringed double raspberry. \$1.25.

Brandy Wine. Dark orchid double, white edge. \$1.25.

Cortez. New fall 1961 release. Giant full dbl. intense dark blue with golden eye on dark green tailored foliage. \$2.00. Sm. \$1.00.

D'Amour. Wavy leaves. Frilled wine single. \$1.25.

Dapper Dandy. Dark quilted leaves. Medium blue double. \$1.00.

Daran's Pink. (H) Our new introduction. Ruffled single pink. Foliage ruffled. \$1.50.

Debbie's Bicolor. (H) New 1962. Nice very dark green girl foliage with red in center of leaf and very dark red on back of leaf. Flower bicolor orchid. \$1.50.

Debbie Moon. (H) Slightly ruffled edge single pink flower with dark eye. \$1.25.

Delft Imperial. Fall 1961 release. Large full double, med. blue frilly flowers with white edge on bronze wavy foliage. \$2.00. Small \$1.00.

Edena Minx. Double blue miniature, \$1.25. Our selection of other miniatures \$1.00.

Elfin Dream. Supreme girl. Semi double ruffled blue and white. Very large. \$1.00.

Fair Elaine. Granger's loveliest of all — huge deep pink full dbl. with crystal white edge that never fades. Dk. green fol. \$2.00. Sm. \$1.00.

Flash. Lyon's Plain leaves. Raspberry double. Sm. \$1.00.

Fringed Nosegay. Fringed double soft pink, green edging. \$1.25.

Forever White. New 1961 Con. winner. A very profuse large single pure white blooms on dark green foliage. \$2.00. Sm. \$1.00.

Jack Frost. Pure white single. \$1.25.

Green Dawn. Bright pink frilly double, with a good green edge. Bright green, frilly edge leaves, red underside. \$1.00.

Hans Brinker. 1961 Convention winner. Super giant deep blue bicolor with wide white edge. Dark green foliage. Blooms like mad. \$2.00. Sm. \$1.00.

Isle of Dreams. Fringed semi-double star shape large deep coral rose blossom. \$1.00.

Kings Ransom. 1961 release. Heaviest blooming single red to date. Good holding color, heavy clusters held well above dark green tailored foliage. \$1.50. Small \$1.00.

Love's Dream. 1961 winner. Very pretty rich wine frilly bicolor single on dark bronzy wavy foliage. Very profuse bloomer. \$2.00. Small \$1.00.

Magic Flame. Deep cerise pink, light foliage. \$1.50. Sm. \$1.00.

Mary R. Our new introduction. Dark green foliage red on back, shines like silk. Makes a beautiful symmetrical plant. Double dark pink. \$1.50. Sm. \$1.00.

Mizz. Lovely ruffled double pink. Foliage ruffled. \$1.25.

Never Lovier. New. Clear white edged double orchid. Dark foliage. \$2.00. Sm. \$1.00.

Norah. Lovely dark pink double, girl foliage. \$1.25.

Pink Fire. Double fringed, very showy glowing flame pink, leaves red backed. \$1.00.

Pink Mist. Soft pink double. Foliage bronze. \$1.25.

Princess Joan. Wavy supreme foliage. Large fringed single white. \$1.25.

Priscilla Landaker. Beautiful ruffled semi double white. Girl foliage. \$1.00.

Purple Gown. (H) Good flowering blue single. \$1.00.

Rollo. Large star blue double. Small growing plant, \$1.00.

Shrill. New red color for African Violets. Very pretty. \$1.50.

Sin Purple. Purple fringed double. \$1.25.

Spun Velvet. Giant double pink flowers on bronze wavy foliage. \$1.50. Sm. \$1.00.

Star Holly. Holly leaves, pink double. \$1.25.

Susan. Large medium blue double. \$1.25.

Tea Rose. Slightly quilted leaves. Dark pink double. \$1.00.

Tea Time. Wavy leaves. Frilled single white, pink edge. \$1.25.

Wedgewood. Luscious light blue double, excellent black-green fol. \$1.00.

Western Symphony. Bicolor. \$1.00.

Wind N' Sea. Medium blue, with ruffled double. \$1.00.

Beginners collection our selection 5 for \$4.00.

Plant will be sent in 2¼" plastic pots when possible. We will send an EXTRA plant on \$10.00 order or two extra on \$20.00. You may have choice of color, double or single. We have many new varieties in too small number to list in this catalog.

Leaves, 50c each. \$5.00 doz. 25 for \$9.00. 50c for postage and packing. \$1.00 extra if wanted by air mail. If special delivery add 45c. Please give a few substitutes, if you do not, we will substitute with as good or better varieties if necessary. Dbl. means double, b blue, p pink, w white. Many new varieties in this list. We have a list of several hundred varieties for stamped and addressed large envelope or 10c. We expect to have a new list of leaves out by March for stamped and addressed large envelope or 10c.

Alabaster, dbl w

Alethia Martin, dbl

Alpine Crinkles

Alpine Halo

Arabia

Blackberry Fluff

Black Cherry Supreme, dbl r

Black Magic Supreme, dbl

Black Pagoda

Blue Le Fleur

Blue Modeste

Blue Rose

Blushing, dbl, p & w

Blushing Beauty

Bonnie Girl

Brandy Wine

Breathless, dbl p

Brides Waltz

Caravan Queen

Caravan Pageant

Caravan Sultan

Cathy Ann

Cerama

Cellini

Chapel Boy

Charm Song, dbl b

Chartreuse Fringe

Cheri Belle

Cherry Wine

Cinderella

Claret

Command Performance

D'Amour, r

Deft Sweetheart	Illusion, w	Putti Kat
Delicate Afaire, dbl p	Impresario	Racy Red
Devine Song	Indiana Jewel	Redderness
Dona Felisa	Isle of Dream	Red Hart
Dorothy Gray Supreme, dbl p	Jack Frost, w	Red Lilac
Dorothy Jean	Jasmine	Red Sea
Double Clarissa Harris	King of the Blue	Shrill
Double Fringed Raspberry	Lavender Doodad	Silver Moon Supreme, w
Double Garnet Supreme	Lavender Shadows	Sin Purple
Double Pink Fire	Lilliam Jarrett	Sir Echo
Double Pink Waverly	Little Jewel Supreme, dbl p	Sister Alice
Double Ruffled Queen	Livin' Doll, p	Smoky Ruffles
Dresden Dancer	Mauve Dip	Snowfall
Edena Rose	Merry Widow	Snows of Kilimanjaro
Elfin Dream, dbl	Mint Popcorn, dbl w	Spring Song
Fai Lee	Mizz, p	Spun Velvet
Fairy, dbl, p & w	My Sin	Star Frills
Fairy Fringe, dbl	My My	Star Holly
Feathertop, dbl p	Norah	Star Light
Flash, dbl p	Orchid Premier	Susan, dbl b
Fleet Dream	Oranga	Swami
Frathel's Debbie	Paris Pink	Talisman
Frilly Blue Cluster, dbl b	Peppermint Pink	Tea Rose, dbl
Fringed Nosegay, dbl p	Pink Constellation, dbl	Tea Time
Fringed Orchid Rosette	Pink Drift	TV Vallin Pink
Fringed Raspberry	Pink Holly	Top Sales
Gabriel	Pink Jade, dbl	Western Symphony
Gay Ninety	Pixie Fire	White Antoinette
Gerri	Pink Wings	White Sales
Giant Ruffled, dbl	Play Boy Supreme	Wings of Eden
Good News Supreme, dbl p	Priscilla	Winter Green
Gold Lace	Priscilla Landanker, dbl w	Wintry Rose
Green Dawn, dbl p	Princess Joan, w	Whiff
Green Years	Purple Gown	Zorro

African Violet Leaves 35c ea. 3 for \$1.00. \$3.00/doz. Any over 12, 25c ea. 25/\$5.00. We give extras depending on size of order. We will be glad to make selections for you if you will give us price range, color, single or double.

Alaskan Waters, dbl b	Dolly's Dream, dbl b	Improved Boyce Edens
Angel Flake, dbl w	Double Inspiration Sup.	Iroquois, dbl p
Angel Lace	Dbl. Midnight	Kimberly
Autumn Moon, dbl b	Dbl. Red Comet	Legionnaire
Beau Kay, dbl r	Dbl. Uncle Bob, p	Lilac Dale
Blue Crepe, dbl b	Dbl. Snow Frills	Lingo
Blue Duet, b	Ebb Tide	Little Giant Blue, dbl
Blue Pom, dbl b	Ember Pink Sup.	Little Giant Purple, dbl
Cathy Reed, p	Fancy Free, dbl p	Love Knot, dbl p
Centennial Sweetheart, p	Fire Dance, r	Love Song, b
Cherry Ice	Fringed Pom Pom	Mark Roberts
China Doll	Grotei Red Girl	Masquerade
Clarissa Harris, p	Good News, dbl p	Matchmate
Constancia	Her Grace	May Melody, dbl b
Corrine, dbl w	High Noon, r	Melody Air, dbl p
Cup of Claret, r	Holly Halo	Miss Monroe, r
Dorothy Gray, dbl p	Hollywood Ace, dbl b	Mr. Chicago, dbl b
Dixie Moonbeam	Hugonaut, dbl	New Dawn, r

Peach Chiffon, dbl
 Pink Grotei
 Pink Petticoats
 Pink Puff
 Pink Vixen
 Prestige
 Pride of Rochester, dbl p
 Red Glow
 Rose Wing
 Santa Maria, b
 Sea Foam, dbl

Senora Ramona
 Shag, dbl
 Show Cloud, dbl
 Show Day
 Show Stopper
 Silver Field, dbl
 Skywayman
 So. Sweet, dbl p
 Spic, dbl b
 Star Gazer
 Star Blue

Sunbonnet Sue
 Torchy
 TV Beaumont Beauty
 TV Cut Velvet
 TV Play Boy
 TV Scandal
 TV Whispers
 Valor Blue
 Velvet Queen
 White Goddess
 Whiff, r

BEGONIA FAMILY — Begoniaceae

How to Grow Tuberous Begonias. No plant or flower is more beautiful than that of a well grown Tuberous Begonia. They may be grown in pots or in the garden in most states. They are semitropical but do not do well in the tropics.

In Calif., south of San Francisco, they do best near the coast but we grow fine plants and flowers in this hot, dry inland valley by cooling them off by daily sprinkling plants. Our flowers tho are smaller than those grown in cooler areas. Water hurts neither foliage nor flowers. The best place is in a lath house, north of a building or under trees here.

A loose sandy soil containing much well rotted leaf mould is best. For pots, one may use $\frac{2}{3}$ leaf mould and $\frac{1}{3}$ rich, very sandy loam. If not very sandy add enough sand to the mixture to make it quite gritty. Most commercial growers add a very small portion of dry, powdered steer or sheep manure or well rotted stable manure. It should not be close to the tuber. Do not venture to be liberal. It is probably safer to use liquid fertilizer like Spoonit when plants are well advanced in growth. It is safe to add a tablespoonful of bone meal to each pot.

Do not pot or plant tubers until a sprout appears. A famous grower advises they be spread out in a warm, dark room, the eye up, for sprouting and that moist sphagnum is unnecessary. For potting directions see general culture. Pot or plant sprouted tuber, covering entire tuber. Begonias are shade plants but to bloom well they should have all the sun they can stand without burning.

Begonias like moisture but do not overwater starting tubers or small plants. It is a good plan to dust tubers with sulphur to prevent mildew. If it starts, use sulphur.

If you want fine large flowers, pinch off all but one sprout on tuber—except on the Lloydii. Dropping of buds may be caused by mildew, overwatering, lack of fresh air circulation, too dense shade or too hot.

We list 1 $\frac{1}{4}$ "-1 $\frac{1}{2}$ " tubers, a medium size. The size of tubers does not govern size of flowers. Even small tubers produce full sized flowers, but smaller plants. Culture does affect size of flowers and plants. For the best reference book on Tuberous Begonias get Worth Brown's book listed in this catalog.

Prices. Please note that the dozen rate applies only when 6 or more tubers of one kind or assorted are packed in one bag. If separately labelled, 12 tubers take the single rate as is our rate on all bulbs.

Giant Ruffled Doubles. Improved Camellia type. Nine colors: Apricot, Pink, Salmon, Scarlet, Red, Orange, Rose, Yellow, White. Price 30c ea., 6 of one kind or assorted, \$1.50. 9 colors \$2.40.

Giant Double Picotee. Pink Shades, Salmon Shades, Red Shades and Apricot. 30c each. 4 colors \$1.00.

Double Hanging Basket, or Lloydii. There are many blossoms per tuber. An improved large-flowering strain. Red, Salmon, Apricot, Rose, Yellow, White, Pink, Orange and Scarlet. 35c ea. 9 colors \$2.60.

Rose Form. Double. Another improvement on the old Camellia type. The petals are

smooth and long, and with a very distinct center. Cardinal Red, Yellow, American Beauty, Pink and Flame Orange. 30c ea. 5 colors. \$1.25.

Begonia Evansiana. Hardy Tuberous Begonia. Mulch in colder climates. Plant about 4 inches deep. The 2 ft. plants have typical begonia foliage and a multitude of pink flowers. Recommended for shade garden but stands quite a bit of sun if watered liberally. 50c each. 6 for \$2.50.

Complete collection of all Tuberous Begonias listed, 28 varieties, single price \$8.55 for \$7.65.

THE ORCHID FAMILY — Orchidaceae

The ideal place for an amateur to grow orchids is in a hobby greenhouse.

Culture of Cattleyas. By far the most desirable of orchids. Many amateurs are having success in growing and flowering this most beautiful flower. Briefly you must have a greenhouse, a room or a glassed in porch where the plants will have good, strong light but no direct sun, unless a little in very early A.M. or late P.M. Greenhouse glass must be shaded by a coat of white wash or shading compound. In the home, shading may be had by using muslin curtains. If the foliage becomes very light green or yellowish the light is too strong; if a deep rich green, the shade is too much. 65° to 80° is close to the best temperature range. Note the temperature, light exposure and humidity favorable to African Violets. The same is about right for Cattleyas. You can grow them side by side. But watering is different.

We spray the foliage of Cattleyas at least once a day in summer and if hot often twice. This cools them. Do this about noon, earlier if temperature becomes too high. Do not spray in late P.M. as foliage should become dry before night. When cool weather arrives we spray less often, much less often in winter. Once or twice a week may be enough or even too much, if you do not properly heat for their comfort. A little water held around the base of a bud spathe may cause it to blacken and rot off. Over watering Cattleyas is the most common error. We do not usually pot water oftener than once a week and often spraying is enough if some falls on the osmunda. You must study your plants and note their reactions. Success will reward you.

Cattleyas. We offer blooming size plants for \$5.00. These are in 4" or 5" pots. Assorted species and hybrids.

C. Genevieve Toy. (C. Cordary x C. Ardentissima.) Flowers very dark and beautiful. Spring. 5" \$15.00.

C. Remy Chollot. Medium lavender color. \$10.00.

C. Enid. Very large, rose purple flowers in winter and some flowers can be cut throughout the year. \$10.00.

C. Mt. Royal. \$7.50.

If wanted in pots they must go by express collect, out of pots with enough potting material, by Parcel Post.

Brassavola culture. They may be grown in any media used for growing orchids. They may be grown in lath house or under trees in Southern California.

Brassavola glauca. Large white flower, slightly fragrant, often tinted with green, lip white sparsely marked with pink and purple or entirely white. Loose, with material to pot, by Parcel Post, \$8.50.

Brassovola Digbyana. Plant resembles a Laelia. The white flowers have a fringed lip. We grow in baskets. Price \$9.00 f.o.b. express. Out of pots with enough potting material, by Parcel Post.

Oncidium cebolleta. Rush-like leaves of bronzy color, 8 inches long crowded together. The flower stem is well branched and carries dozens of small yellow and brown flowers. \$5.00 ea.

Cypripediums may be grown in "cool house." We grow them in our orchid house which also has Cattleyas and other plants. They will grow and flower in your window garden.

Cypripedium callosum. In shape, similar to our native Lady Slippers and closely re-

lated. Correct botanical name is *Paphiopedilum* but usually known as above. Flowers are fine for corsages, 3½"-4" wide, white variously marked with green and purple veins and a brown purple lip \$5.00. Blooms about Jan. to April, sometimes later. *C. insigne*. \$3.50 each. We will ship by parcel post out of pot or if wanted in pot will be sent by Express Collect.

Epidendrum o'brienanum. This orchid has a large terminal cluster of brilliant red flowers, each in the typical orchid form. The flowers open 10 or more at once and are about 1¼" wide. The plant makes a large cluster of tall stems, 3 ft. or more. Under good culture they flower all the time. They will grow well in full sun exposure; and abundance of water in summer. They grow easily in the garden in the south. In the north they are easy in pots or baskets. Small rooted plants 75c ea.

E. Hawaiian hybrids. Button-hole Orchids, white, orange, purple and yellow flowers as well as two-tone. Rooted cuttings. \$1.50 each. Assorted only.

Epiphronitis veitchii. A choice miniature orchid. Brilliant flowers, orange-red, blooms in very small sizes. Easy to grow. \$2.25.

Habenaria radiata. The Egret Flower. (At last! An orchid anyone can grow anywhere.) A deciduous terrestrial orchid from the orient that grows from small bulbs about the size of a bean. The glistening pure white flowers are held on stems twelve to fifteen inches high. Each stem carries two to five flowers one to two inches in diameter. The long green spurs add much to the attractiveness of the flowers. The feature of the flower is the fringed edge of the lip which gives the flower the appearance of a crane in flight. The individual flowers are long lasting and very pretty.

The plant is extremely hardy and will survive sub-zero weather, but will grow equally well in our southern climates or in a glass house. Packed moist, the bulbs will keep for many months in a refrigerator, and may be planted monthly in order to have flowers nearly all the year. It may be planted in almost any medium, such as garden soil, peat and sand mixture, orchid mixtures, sphagnum moss or leaf mould. If in moss it must be fed regularly, otherwise treat it like any other plant in your garden or house. The one most important cultural point is never to let it go dry. It must be kept moist at all times. We recommend six bulbs to a four inch pot.

MISCELLANEOUS

Tecolote Ranunculus. Giant Double Camellia type blooms and huge brilliant Ruffled Doubles. 50c doz. \$3.75/100. We also have smaller bulbs at a special low price of \$2.20/100. For lots of flowers for picking or flowering in your garden plant several hundred. 500/\$9.00. **Anemone St. Brigid.** Large double and semi-double flowers. Mixture of brilliant hues and delicate shades of scarlet, rose, pink, lavender and blue. 60c doz. \$5.00/100. **Anemone Monarch de Caen.** Magnificent strain of single Poppy Anemone with immense flowers. Mixture 50c doz. 100/\$4.00.

Culture. Hardy only in deep south. It is best to start after summer heat has gone—in mild autumn weather. Don't forget to keep them moist. Transplant to garden in deep south or to pots in north. You can start them or grow them in a cool room in the house in winter. They should have sandy soil with peat added. Heat is their enemy.

Aphelandra Louisi. A new plant for the window garden or greenhouse. Deep green with white veins. Flowers are yellow. New and very popular. Small plants \$1.00 each.

Ceropegia. The following are vines having long trailing or twining stems. They may be grown in soil composed of loam, sand and leaf mould or peat, in pots or hanging baskets. Plant at once and keep only slightly moist until started. The flowers are very unusual. Prices are for small tubers or cuttings.

Ceropegia Woodi. Hearts on a String. Sweetheart vine. Rosary vine. Heart shaped leaves. The most desirable species. 50c.

C. debilis. Cylindrical leaves. Rapid grower. 35c.

C. Barkleyi. The oblong leaves are pointed at the apex. 60c.

Cacti and Succulents. 10 assorted Cacti or Succulents, \$2.00. 20, all different, \$3.25.

Zygocactus. (Christmas Cactus). These are very popular plants. We believe are very

good hybrids. We have over twenty varieties. If you have any of the ones we list mention them and we will substitute another variety or varieties when you order. We will send growing directions with your order.

Zygocactus salmonea. Old-Fashioned Thanksgiving cactus. **Z. delicatus.** White Christmas cactus. **Z. Mia.** Two tone pink flowers. **Z. Pink Lady.** Comparatively large flowers. **Z. South Orange.** Manda hybrid, orange tinged flowers. **Z. bicolor.** True "crab-claw" cactus. Price. \$1.25 each. 5 for \$5.75. 10 all different, \$10.00.

Schlumbergera Gaertneri Giant. A larger growing form of the Easter Cactus, leaves up to five angled, may bloom most any time during the year. Large flowers. A must for your collection. \$1.50. **Rhipsalidopsis Rosea.** (Violet Beauty). One of the most heavenly plants when in flower. Very small joints, flowers violet rose the size of a quarter which at times may completely cover the plant. \$1.25.

Heliconia species. Heliconias are sometimes grown in the greenhouse, or out-of-doors in warm regions for the foliage effects, making large clumps if given room. The plants thrive well in rich loam with plenty of water. They have large banana-like leaves. \$2.00.

Tree Peonies. Will bloom April and May the first year. True to name. All fully double. **Higurashi,** Red, **Yachiyo-Tsubaki,** pink, **Hanadaijin,** purple. \$2.75 ea. One of each \$7.75. **Kinko.** Fully double bright yellow, \$4.30. All are top quality, large 2 year old grafted plants. One each of the four \$10.75. Order early.

Tradescantia pexata. The leaves are densely covered with white hair. Flowers lavender. An interesting plant for your window or greenhouse. 50c ea.

Gingers. Culture. Plant in rich soil, provide light shade and plenty of water. They should never dry out while growing. They refuse to flower if keep too shaded. The flowers are produced in terminal heads and are very fragrant. Delivery any time.

Alpinia nutans. Shell ginger. Very tall growing evergreen ginger lily. The attractive flowers are produced at the top of the leafy stems. Flower spikes hang downward like a cluster of grapes. In bud it is white tipped pink. Open flowers exhibit orange and red inside. \$1.75.

Hedychium coronarium. Garland-flower. Floral bracts large and firm and closely imbricated, with 4 to 6 white very fragrant flowers. \$1.00.

H. flavum. Yellow Ginger. Much like Gardnerianum, tall grower. \$1.00.

H. gardnerianum. (Kahili Lily) Lvs. 1½ ft. long and 6 inches wide; fls. light yellow, with red stamens. Fragrant and a sure bloomer. \$1.00.

Hoya. Much in demand. Used in dish gardens as small plants, or worked on trellis or pole, as a specimen, they always attract attention. **Hoya Bella.** Hanging basket Hoya. Dainty pointed foliage, flowers freely with clusters of white star-like flowers, pink center. Very fragrant. \$1.50. **H. motoski.** One of the best, very large, round, shiny leaves. Blooms over a long period of time, white, very fragrant. **H. Silver Leaf.** This is quite a different plant. Large umbel of lovely maroon flowers. Leaves beautifully marked with silver. \$3.00.

THE PINEAPPLE FAMILY — Bromeliaceae

Bromeliads include Billbergia, Aregelia, Aechmea, and many other genera.

Billbergias are most unusual and fascinating plants. Not only are the flowers in intriguing pastel shades but the floral display is made brilliant by the large vividly colored bracts that cover the scape. The leaves form a rosette and are more or less rigid. Some have brightly colored leaves and others are often mottled, striped or barred. All are desirable foliage plants.

In the outdoor garden they should have the same soil as recommended for pots. A few, like "nutans," will grow in nearly any soil but will do much better in the type recommended. They do well on the trunks of Palms.

They need about half shade. Too much sun will burn and finally destroy the foliage. Those species and varieties having highly colored foliage do not develop their rich colors when too deeply shaded. Most of our plants are grown in a well shaded Clivia house. When well established and growing, richer colors may be brought out by giving a little

more sun than we do. **Culture** of *Aechmea* and *Aregelia* is the same.

***Aechmea bracteata*.** Beautiful thick green leaves, long lasting flower spike, pink bracts. \$2.50.

***A. calyculata*.** The cones of bright yellow flowers are carried on thin stiff stems 18" high. Tubular rosettes of bright green foliage are about 15" high. \$1.50.

***A. fasciata*.** The Urn Plant. Urn-shaped plant of green leaves banded white, powdery substance. Very attractive in foliage, but the flower, which lasts for months, is even more so. It flowers July to August with pyramid shaped heads of pink bracts from which emerge numerous flowers colored French blue at first, turning to violet and then to deep rose. \$8.50.

***A. Foster's Favorite*.** An outstanding hybrid nearly identical with *Aechmea recinae*, but instead of the foliage being green, it is a bright shade of glossy red. The drooping flower stem is very long. \$4.00 each.

***A. luddemanniana*.** Bronze to maroon leaves, mottled darker, white berries turn to purple. \$5.00.

***A. mariae-reginae*.** Robust rosette of broad, gray-green, leathery leaves, recurved and with toothed edge; stout spike with pendant, delicate pink bract-leaves, topped by cylindrical head of red-tipped berries and violet flowers. \$7.50.

***A. miniata* var. *discolor*.** Dark green foliage with red back. Berries stay on a very long time. \$4.00.

***A. ortgiesii*.** A very useful dwarf plant with rosettes of recurved serrated leaves looking more like a *Dyckia* than an *Aechmea*. The deep lavender flowers are carried on a brilliant red cone in the center of the leaves which also become red occasionally while the plant is in bloom. \$5.00.

***A. penduliflora*.** Bronze red foliage, blue and white berries. \$3.00.

***A. pineliana*.** Attractive, wide open rosettes of foliage toothed with dark spines, and colored soft shades of rose, copper, gray and green. The stem is covered with red bracts and topped by a small head of yellow flowers. The berries last a long time in color. \$3.00 each.

***A. tillandsioides*.** Foliage resembles *Billbergias*. 1 foot high, red bracts. Flowers yellow followed by turquoise. \$5.00.

***A. Weibachii*.** Attractive rosette of oblanceolate coppery-green leaves wine red beneath, and spined; inflorescence on panicle with glowing crimson bracts and orchid-colored ovaries and flowers. \$4.00.

***Billbergia Burkholtzi*.** Tall, slender, erect green leaves. Rose bracts, lavender fls. \$2.00.

***B. distachia*.** Long, reddish green lvs., spotted cream. Rose bracts, blue and green fls. 75c.

***B. Elvenia Slosson* (*Nutans* x *Alberti*).** Tall plant with very attractive flowers in spring. It takes a lot of postage and its fine quality makes it cost \$3.00 each.

***B. nutans*.** Mid-winter, beautiful inflorescence on small plants. Fine pot plants. 75c.

***B. pyramidalis*.** Wide green lvs. Red fls. tipped violet, red bracts. \$2.00.

***B. Rubro-cyanea*.** Most colorful foliage, red and green spotted cream. Green fls. edged blue. Crimson bracts. \$1.00.

***B. speciosa*.** Green lvs., striped on back. Green fls., tipped blue. Rose bracts. \$2.00.

***B. Theodore L. Meade*.** Green lvs. and large, beautiful inflorescence, continuous all year on new growths. \$1.50.

***B. thyrsioides*.** Forms very large, wide open rosettes of leaves. It blooms in August with a large flat head of rosy flowers held erect on a stem covered with deep rose bracts. It is commonly known as Torch *Billbergia*, and is really worth having. \$3.00.

***B. thrysiflora* (*pyramidalis* x *amoena*).** Finest hybrid. Beautiful inflorescence. \$1.50.

***B. Zebrina*.** Lvs. banded white on back. Salmon bracts, green fls. \$1.50.

***Cryptbergia Media*.** A bigeneric bromeliad hybrid of *Billbergia* and *Cryptanthus*. The flowers are very insignificant, but foliage is lovely, being of pinkish and bronzy tints

especially when given plenty of light. Highly recommended for the window garden. \$1.00 ea.

Cryptanthus Bromeloides, var. Tricolor. One of the most colorful of the Cryptanthus. The leaves are variegated white and green, and in strong light it is stained pink and red, assuming a most charming color effect. The amount of color stain varies in direct proportion with the amount of light. \$2.50.

Guzmania minor. (Lingulata). Delicate green, very thin leaves, most brilliant red center during flowering. \$7.50.

Neoregelia carolinae (marechalii). Wide leaves which take on a rosy red coloring. \$7.50.

Neoregelia spectabilis. Called "Fingernail plant" because of the red tips of the metallic olive green leaves; gray crossbands beneath; blue flowers in low cushion. \$3.50.

Nidularum procureum var. purpureum. \$3.00.

Pitcairnia andreanum. \$3.00.

Tillandsia ionantha. A miniature plant of xerophytic habit. It is strictly an air plant and does not have to be planted except for convenience. In nature it grows on tree bark, rock or telegraph wire. The best method of handling is to plant in a very small pot of osmunda and set in full sunlight. Water the leaves occasionally. The two inch rough leaves are crowded together urn-shaped. When in flower the leaves turn red. The flowers are very large for the size of the plant, tubular in form and purple in color with yellow anthers at the tip. This is one of the finest plants we know of for a small sunny window garden. \$1.50.

Tillandsia lindeni. Gracefully curved pointed leaves with maroon lines deepening towards the base. The flattened ten inch flower spike is light pink with large blue flowers emerging alternately from the sides. Very long lasting. Some consider this the finest of all bromeliads. \$7.50 ea.

Quesnelia arvensis. This is a terrestrial plant and should be grown in the ground in a sandy soil mixture with peat added, if potted. The leaves are large and spiny. The bloom is erect, a brilliant shade of pink in a large closely packed umbel. Should be grown in open sunlight. Rare. \$5.00.

Q. liboniana. Light green foliage that is rather stiff in form. The flowers are stunningly different, being a combination of deep orange and blackish purple. \$1.50 ea.

Vriesia marie. "Painted Feather," hybrid larger than carinata, light green foliage tinted pink and showy, flattened, featherlike spike with bracts salmon-rose at base, and yellow dotted brown toward apex; yellow flowers. \$7.00.

V. carinata. A small growing plant with about six-inch spread, plain green shiny leaves. Red, yellow and green colors on a fan-like structure on end of a ten-inch stem. The color lasts a long time. Summer blooming. \$7.50.

V. splendens. Flaming Sword. A beautiful green plant with mahogany stripes. Flower spike tall, flat, and brilliant orange. Spectacular. Rare. Plant does not sucker like other Bromeliads but makes new plants in its own center. Small \$5.00.

Big 4 collection. Nutans, Distachia, Rubro-cyanea and Zebrina. Value \$3.50. Price \$3.25. We will send larger plants if you order them to come by express, f.o.b.

Special offer for Beginners. All labelled. 1 plant \$1.50. 5 for \$6.75. 10 for \$12.50. These are small plants many of the above included.